

**METHOD, SYSTEM, AND APPARATUS FOR BROADCASTING VIA PHASE-SHIFT
KEYING MODULATION WITH MULTIPLE TRANSMIT ANTENNAS**

ABSTRACT

A method of broadcasting multi-layered information in a multi-antenna broadcasting system can include identifying at least a first and second layer of information to be transmitted. The first layer of information can be encoded for transmission using a first unitary code matrix and the second layer of information can be encoded for transmission using a second unitary code matrix. The first and second layers of the multi-layered information can be transmitted with the multi-antenna broadcasting system.